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To: The United States Department of Agriculture, Foreign Agricultural Service, Livestock and Meat Products Division,
The Administrator and
The National Renderers Association, The Cooperator

From: Richard B. Mortimer, President of the National Renderers Assn.

Subject: Report on Market Development Project for Inedible Fats in Japan
by Representatives of the Cooperator during the Period of the
Survey, August 2, 1956 through September 8, 1956

"When John Jones ducked into his shower this morning he probably had no thought that the bar of soap in his hand was made of animal and vegetable fats and oils and of rosin, all of which are agricultural products." The above is from the report of the Secretary of Agriculture for the year 1955. In our travels in the United States and particularly in Japan we have found the same condition to exist, but even to a greater extent. Few people outside of industry and associations connected with either the soap or tallow rendering business had the slightest idea of what tallow actually was or of its various uses. When explained all were amazed. This leads to the conclusion that our association, our industry, and our Department of Agriculture should devote some time and money to an educational and/or advertising program so that the people in our country and in Japan and other countries to whom we export tallow, may have a better knowledge of the product. In particular, we feel that a program of this type in Japan would produce excellent results. The reasons for this thinking will be explained later in this report.

Mr. Richard B. Mortimer, President of the National Renderers Association, and Mr. William F. Beedle, President of the Geo. W. Gooch Laboratories, Ltd. of Los Angeles, both as representatives of the Cooperator, or the National Renderers Association, herewith report specifically to the Administrator and to the Cooperator on the inedible fats (tallow) situation as we found it to exist in Japan during the period of the survey as noted above. Also included are comments on existing conditions and a few suggestions which we believe most worthwhile for increasing the consumption of tallow in Japan.

Before going further, we wish to gratefully acknowledge the splendid cooperation and assistance afforded us by Mr. William Dewey Termohlen and his entire staff in the Agricultural Attache's office in Tokyo, Japan. Through the kindness of Mr. Termohlen, Mr. Akers, Mr. Rollefson, Miss Sullivan, Mrs. Weadock, Mrs. Thompson, Mr. Ono, and also Mr. Nishino of Osaka, we were able to carry out and see to a successful conclusion the schedule arranged for us by the Japan Oil and Fats Processing Industry Association. This schedule was arranged in cooperation with Mr. Akers and Mr. Ono and was complete in every detail. The cooperation of the other members of the staff has also enabled us to complete our reports and the necessary letters and cables in connection with the project. Without this splendid help we are certain that the project and the report would not have been nearly as complete. Furthermore, we were most fortunate to have had either Mr. Akers or Mr. Rollefson with us on most all of our visits to plants and laboratories. This has made it possible for one of the Assistant Attaches in Mr. Termohlen's office to very definitely

increase his knowledge on the subject of animal fats and oils, the manner in which they should be sampled, and the manner in which they should be analyzed. In addition, by their being with us, we felt that no unfair advantages were taken of us at any time.

In order for all of our members to understand the situation in Japan, I feel that it is important to start with a certain amount of background data. The members of the Department of Agriculture in Washington, D.C. will be fully aware of this information but I am sure that all of our members are not. As of the middle of August 1956, the newspapers estimate the population of Japan to have crossed the 90 million mark, and the population of Tokyo to have crossed the 9 million mark. The population of Japan is increasing at the rate of about 750,000 people per year. It appears possible that the population will reach the 100 million mark by 1970, or surely that it will exceed that number by 1975. The density of the population in Japan is about 12 times that of the United States and when based solely on the cultivated area, it is over 4,200 persons per square mile. Japan's total land area is only about 147,000 square miles. The area of the state of Montana is 146,316 square miles. California has an area of 156,803 square miles. With the same density of population California would have 95 million instead of its present approximately 12 million.

Much of the country in Japan is mountainous. Consequently, this land does not lend itself to cultivation. It is interesting to note, however, that substantially over 50 percent of the cultivated or arable land is used for the raising of rice. In the book, "The Japanese Are Like That" by Ichiro Kawaski, some of the reasons for the large percentage of cultivated land being planted to rice are found. "The quantity of rice grown in a given area can feed twice as many people as can wheat or other grains grown in the same area (p. 76)." "The Japanese love of rice is both passionate and ingrained. They do not believe that any meal is really substantial without rice. (p. 73)." "No Japanese can do without rice for it gives him a sense of fullness that no other food will give." On Page 93 of the book entitled, "Japan, The Official Guide," the following is believed to be of interest: "Japan is one of the have nots." "Japan has to import one-third of its iron ore, nine-tenths of its petroleum, one-third of its copper, one-third of its aluminum, and two-thirds of its salt. Crude rubber has to be entirely imported as well as most of the cotton and wool. Twenty percent of the food must be imported. Roughly speaking, Japan produces only about 40 percent of the raw materials used in its industries."

Japan does raise some cattle, although cattle raising is not a major industry. Many of the cattle raised are for work animal purposes, few for food. There is some famous beef raised in the Kobe area but this is reserved mostly for foreigners, who are seeking delightful food and are able to pay for it. Another quotation from Mr. Kawasaki's book is quite apropos: "The annual average consumption of meat per person in Japan is only about three pounds." "This amazing low average is explained by the fact that living standards vary widely between rural and urban areas. For as some city dwellers eat meat fairly frequently, farmers, even the relatively wealthy ones, subsist almost on a vegetarian diet throughout the year. There is no Japanese counterpart to the American farmer who drives a motor car and eats the same food as city inhabitants. Japanese farmers

consume large amounts of rice every day mainly because they have little else in the way of foods. The average Japanese farmer is so poor that he cannot even afford fish more than once or twice a month. He lives almost entirely on rice and vegetables grown on his own farm. As a result, some of these farmers suffer from beri-beri, a paralysis of the legs caused by a vitamin deficiency." The 4-H boy and girl who were the International Farm Youth Exchanges this year both reported that on farms where they stayed in both July and early August they were served roasted grasshoppers. However, as will be noted from the following paragraphs, the standard of living, especially in the cities, is improving. Many small clean retail butcher shops were seen. We were informed that these shops are a rather new innovation since the war.

Of tremendous importance to all United States industry is the fact that the average annual cash wage in industry, including fringe benefits, in 1954, was estimated at about \$720. The average annual cash income of city families was from about \$900 to \$1200, while a total annual average income of a farm household was estimated to be less than \$200. In this latter case this probably included the income of all of the children. (These facts are from the Economic Division, American Embassy, Tokyo). The above facts and other data contained in this report must be weighed very carefully when planning market development projects under Public Law 480 or under any other program. This is especially true in connection with advertising or other activities on either radio, television or other media. The relatively low level of income requires a considerably different approach than is used in the United States. Successful American advertising methods could fail miserably in Japan.

Even in view of the above facts, however, our own personal observations have been that all movie theatres, coffee houses, night clubs, place of entertainment, and sight-seeing buses, especially in and around Tokyo, Osaka, and other large cities, are patronized to capacity. There are several important reasons which explain these facts. First, since the war, wages in Japan have been increasing slightly and the people now feel that they have a little more luxury money to spend. Secondly, the people in these large cities are so crowded, owing to the lack of proper housing, that they must seek some outlet for their spare time. Remember that the average Japanese house has less than three rooms. This leaves much to be desired when we consider that the Japanese families are usually quite large. Another example of the improvement of the wage and living standards in the large cities is the tremendous interest in amateur photography. Japan is literally a "country of shutterbugs." Nowhere have we seen as many people taking as many pictures as we saw in Japan.

We must remember that Japan must export to live. In order for us to sell tallow or any other commodity in Japan, we must be willing to buy the products Japan has available for export. Furthermore, the prices and the quality of our items to Japan must be in line with those of other countries producing similar products. Of the two, I believe that quality and the care in preparing the product for shipment are even more important than price.

This brings up the matter of the quality of tallow which has been reaching Japan. In view of the fact that a great deal of tallow is still arriving in Japan in drums, the first part of these remarks will be limited

to that type of shipment. Our first experience with observing off-color drums was in Kyoto, where we saw two drums of what was supposed to be extra fancy tallow. The tallow in question was as red as bright-red paint, absolutely unusable so far as the factory was concerned. True, this was an item of only two drums but it reflected on the carelessness of the producer or the person who drummed the tallow. The tallow was in drums which apparently had contained an oil soluble dye and consequently the tallow was ruined. This situation was also witnessed by Mr. Rollefson, Assistant Agricultural Attache. It is our understanding that a claim will be made and it certainly should be settled to the benefit of the purchaser. Our second experience was on the afternoon of Tuesday, September 4. On this occasion, I was again fortunate in having one of the Assistant Agricultural Attaches from Mr. Termohlen's office along with me. We observed two rather large lots of tallow, all supposedly extra fancy. We witnessed the tallow from ten drums, picked at random, being either dumped or sampled. One drum was so foul and bad that it was useless to even dump it. It wouldn't classify as even the lowest grade of tallow. The second drum (and on this one the head was cut out for our benefit) had apparently contained some sort of oil-base paint. The tallow was a reddish grey and contained globs or splotches of red oil paint. Naturally, this was entirely unsatisfactory for high-grade soap, or any other use. Two of the other drums which were bought as extra fancy turned out tallow which would not qualify as special. Samples were taken and we witnessed the FAC color being run in the laboratory of the company. It was much darker than 19. The remaining drums, six of the ten which we saw emptied, were satisfactory. The other large lot consisted of substantially over 200 drums. We more or less picked out certain drums which could be easily reached and had the officials of the testing laboratory sample them in our presence. Over 10 percent of the drums which we sampled were very definitely off-color; one in particular looked to be completely unusable. Black-and-white still pictures and colored motion pictures were taken of this entire sampling operation. Owing to lighting conditions the color pictures may not be good but the black and white should be excellent. We were extremely careful not to ask the name of the shipper nor the name of the exporter or broker. Neither will we disclose the name of the company, except in case of a claim and only then if we are asked to do so by the proper people. Needless to say, the secretary of the association of the area involved has been advised. Furthermore, he has been advised to ask the members of that area to exert more care in the selection and examination of drums and of the material which goes into the drums. As mentioned earlier, one of the Assistant Agricultural Attaches was with us and was able to personally observe the condition of the contents of the drums in question. Because this individual was with us over a great number of days and visited many plants and saw much of the operations of our work, we feel that he now is qualified to make the necessary simple observations in cases of dispute. Unsatisfactory conditions of tallow in drums were quite prevalent in the early 1950's but by the middle of 1954 had improved greatly. It just so happens that this is the worst shipment received to date in 1956. Also, it is interesting to note that the matter of weights during the early '50's was unsatisfactory. Of the last 18 to 24 months, however, this condition has materially improved. Another point which should be mentioned in this same paragraph is that of marking of drums. On these drums which we had the privilege of

examining, the marks were practically obliterated. This necessitated the weighing of the drums heavy and light in order to obtain net weights. This could all be avoided by having the heads of the drums satisfactorily clean, using a good grade of stencil ink and stencils, and then lacquering the heads after the ink is dry. This is one of the items which the committee has asked us to request of our members.

The next item which should be discussed is the shipment of tallow in bulk. During earlier years this was in much smaller quantities than is the custom today. In many instances the quality of this tallow, on arrival in Japan, does not meet contract specifications. It is possible that any one of a number of reasons could be the cause of this deterioration. It is our belief that the majority of the tanks of the ships are thoroughly cleaned before they are loaded with tallow in the United States. Our surveyors are extremely careful on this subject. It is possible, however, that some of the tallow might be processed in such a fashion that heat applied during shipment could conceivably cause a deterioration of the Free Fatty Acid and even the color. This would certainly be true if the tallow contained active enzymes and if it were heated to too high a temperature by the ship's crew. Naturally, this would be a cause over which neither the shipper nor the receiver would have any control. It is one of the important reasons why we were not able to grant analysis at port of discharge as final. In view of the importance of this matter, we proposed to call a conference of all of the steamship companies to see if very definite instructions can be issued to them and to the captains and first officers of all of their ships so as to eliminate the practice of excessive heating of tallow. Bear in mind that this practice is not usual nor intentional but it does and has happened, and will probably happen in the future.

With all of the above in mind, it is necessary for us to remind ourselves and our producers that the Japanese are a proud people and that they like to receive good merchandise. They like to feel that the exporter values their business and that he tries to take care of their requirements. Furthermore, they like to be able to buy a sufficient volume at a price which is not fluctuating beyond normal economic trends. While we must not try to force our tallow on the Japanese market, we should use first-class salesmanship, and endeavor to prove to the Japanese customers that our tallow is the best available, that its price is in line with the price of the same commodity of other countries, and that our producers desire and appreciate their business. Even in view of all of the above I must again reiterate that we must show a willingness to buy Japanese products.

One of the very important meetings which we were invited to attend was held in the office of Mr. Termohlen, our Agricultural Attache. In addition to Mr. Termohlen, Mr. Ono, and myself, eight important Japanese industry people were present. These gentlemen presented to us a plan of advertising and development, which they believe will increase the consumption of soap materially in the large centers such as Tokyo, and Osaka. The meeting was of some 2 hours' duration; during it Mr. Termohlen most capably explained the ramifications and channels through which such suggestions should be received by his office. These suggestions were for the benefit of both the Japanese industry people and our government and associations. It is my firm belief that the Japanese people will endeavor to secure approval of the various governmental agencies in their own country and have the plan presented to Mr. Termohlen through proper channels. This will

eliminate any misunderstandings which might possibly arise on the part of interested persons who, through oversight, may not have been previously consulted on the plan. It is most important to have approval of the various agencies who might be affected one way or another. This is a very conservative and a very constructive attitude and should produce results. When received it is sincerely hoped that it will be considered fairly, particularly in view of conditions as they currently exist in large Japanese cities at this time. This plan consists of assistance under Public Law 480 with the Japanese industry associations in the matter of advertising and education. The following paragraphs will very briefly explain why we believe the plan worthwhile and one which will be productive of results.

At this point some further background statistics are in order. Because this report is going to be quite lengthy these statistics will be brief. In 1951 the total production of soap in Japan was just under 148,000 tons. In 1955 this production had risen to slightly over 279,000 tons. In the first 6 months of 1956 the production was just below 140,000 tons. This is a healthy increase. The greatest increase has been shown in the production of powdered soap; for example, in 1951 there were 10,218 metric tons of powdered soap produced, in 1953 there were 33,373 metric tons, and for the first 6 months of 1956 20,611 metric tons. Powdered soap is used almost entirely in washing machines in Japan because of the excellent soft water there. The following very interesting figures on the production of washing machines explains this increase in powdered soap and also explains why we believe the production of powdered soap will definitely improve from now on. In the year 1949, 364 washing machines were produced. This figure rose to 461,267 in the year 1955. The first 6 months of 1956 saw a total of 367,118 washing machines produced. The total production for the above mentioned 7-1/2 years is 1,219,753 washing machines. The inventory is an estimated 80,812 machines, which would leave 1,138,941 in actual use. By our standards, this is a small number of machines. By Japanese standards it is terrific. Furthermore, the improved and improving living conditions in the cities are resulting in an excellent demand for washing machines. The soap industry association, from very reliable figures, estimates that the average machine uses approximately 6-1/2 pounds of soap per month. Using the figure of the total in use they estimate that the total monthly consumption today of powdered soap in washing machines alone is approximately 4,000 metric tons.

Another interesting sidelight on Japanese economy, and living conditions in particular, is that fewer houses have private bath facilities today than in prewar Japan. Consequently, the use of the community bath has been quite prevalent. The reason for this condition, naturally was destruction during the war. It is good to note, however, that practically all of the houses being built today are provided with bath facilities for their own families. It is conservatively estimated that over the period of the next few years the conditions will gradually change from public to private baths, and at that time the amount of bar soap should also show a very substantial increase in consumption. The consumption of bar or toilet soap has been showing a steady annual increase of approximately 6 percent. In view of the fact that Japan is one of the large producers of soap in the world, it can be realized that the only important factor holding down the home consumption of soap is the standard of living within the country. During our travels we visited many of the large department stores in Tokyo and were pleased to note the large displays of soap and the fact that soap seemed to be selling quite rapidly. Fortunately, I was able to bring back

a few samples of Japanese soap, and while in Japan had the pleasure of using the productions of the various companies. Their soap is excellent.

One other important fact, so far as we are concerned, is the use of detergents and the trend of detergent production in Japan. Synthetic detergents account for only between 5 and 6 percent of the combined soap and detergent production in Japan. Actually, the percentage of detergent and miscellaneous cleansers is only 5.3 percent. Their percentage of increase over the past few years has been limited, ranging at approximately 5 percent. This is largely because the water in Japan is so soft that soaps do an excellent job. In fact, the associations claim that soaps do a better job and that they are in much greater favor with the Japanese people than are the detergents. We feel it is urgent that we assist in an advertising and an educational program that will keep this fact before the people. This is particularly true in view of the increased production and use of mechanical washing machines.

Tallow is one of the most important raw materials for the fats and oils processing industry in Japan. Its consumption of tallow in 1954 was approximately 132,000 tons and in 1955 was 138,000 tons. Of the total consumption in 1955, approximately 60 percent was used for the manufacture of soap. Japan depends on imports for nearly 98 percent of its tallow requirements. Imports of tallow in 1955 were approximately 24 percent greater than in 1954. The United States was by far the largest supplier. In 1955 the United States supplied in excess of 98,000 tons, or 83 percent of total imports. It was followed by the Netherlands with 11 percent, or 12,800 tons of tallow, practically all of which came from the United States. The remaining small tonnage was obtained from Australia, Canada, and a few other countries.

It is estimated that 1956 will show a slight increase over 1955 in the number of tons of tallow imported into Japan. As a matter of fact, the Japanese Government's plan for the 1956 fiscal year, which is from April 1 through March 31, 1957, calls for a total supply of 140,950 tons. Of this quantity approximately 129,400 tons will be used for industry, (soap, chemical, and the like) and 11,550 tons for food purposes. It seems unnecessary in this report to break down the actual arrivals of tallow either by month, by source of export, or by price data. The data given above should be adequate for our purposes. Probably the most encouraging factor is that the Japanese Diet has been seriously studying the possibility of returning tallow to the automatic allotment plan and, from sources which we deem reliable, it is understood that this plan will become effective as of April 1957. If, and when, tallow is returned to the automatic allotment system, many of the difficulties of the small soapers, which are legion in Japan, will be eliminated. Suffice it to say that under present conditions when large quantities of tallow are imported into Japan and then broken up into small quantities, some of the soapers feel that they are not getting exactly what they ordered and, naturally, it makes them unhappy. It must be pointed out at this point that there are approximately 316 soap factories in Japan. Twenty-one of these companies have more than 300 employees; 9 have between 100 and 299 employees; 42 have between 30 and 99 employees; and 244 have between 1 and 30 employees. For the year 1955 the 21 companies produced 44.4 percent of all of the soap manufactured in Japan. Furthermore, it is interesting to note that 47.31 percent of the total production was in Tokyo, and 35.6 percent in Osaka. The balance was distributed among 6 other cities in Japan.

At this point in the report I would like to break the statistics and details and inject a thought or two regarding our first work in Japan. This was on the morning of July 12, when the Japan Air Lines' transoceanic plane landed us at the Haneda Airport. That afternoon we presented ourselves to Mr. Termohlen and Mr. Akers of the Agricultural Attache's office. Fortunately, we had with us a copy of our market development project from the Department of Agriculture in Washington, D.C. While we know that we were not officially due in Japan until later in July, we had hoped to proceed to Korea and finish the Korean job first. Due to various matters over which we had no control, we were advised to take our vacation or holiday to Hong Kong before going even to Korea. This we did, and on our return started the preparation of a schedule with the Japan Oil and Fats Processing Industry Association, through its chief secretary, Mr. Tatsuro Sato and Mr. Akers, the Assistant Agricultural Attache. Mr. Akers was of tremendous help in this matter and forwarded the tentative schedule to us in Korea where we were able to approve and accept it and consequently, when we returned to Japan on August 2, everything was in readiness for the immediate start of our work. On the morning of August 3, we held our first industry meeting. This was under the sponsorship of the Association and was attended by more than 50 representatives of industry, export-importers, brokers, and so forth. That afternoon we had the pleasure of visiting one of the prominent plants in Tokyo. The next day, two plants were visited. The 7th of August saw the same situation -- two more plants, one in the morning and one in the afternoon. On all of these occasions I was permitted to take pictures, and believe that these pictures as a supplement to this report should be most interesting. As in the United States, in Japan some of the plants have regulations prohibiting the taking of pictures in buildings. Because of our thoughtfulness in asking permission, we found that we were received with more or less open arms and were permitted to take pictures where perhaps few others had had such an opportunity. Unfortunately, our film was color and of rather slow speed. Consequently, our photography was confined to the outdoors, except in a few cases after we had been able to have some high speed black and white film shipped to us from home.

In the days from here on, I will simply state that we witnessed the sampling of drums in a warehouse and plants, the sampling by the Japan Oil Stuffs Inspector's Corporation or Nippon Yuryo Kentei Kyokai, of tallow in the tanks of a ship and in many barges. We also inspected some of these barges before they were loaded with tallow from the ship, also, the drumming of tallow directly from barges. The areas covered were Tokyo, Yokohama, Osaka, Kobe, and Kyoto. My notes and business cards (these are called "name cards" in Japan) make a very interesting source of historical data.

The above-mentioned film was sent back to the United States for developing just as rapidly as possible so that it would be ready for editing on our return home. The task of editing, titling, and narrating some 3100 feet of film will be tremendous. I only hope that the editing can be completed in time for the annual convention of the National Renderers Assn. in Boston, October 1, 2, and 3, 1956. Notes have been sent to my office for compilation so that the sound strip on the film will be as accurate as possible. In many cases it was necessary to take pictures somewhat on the run. Our hope is that they will turn out satisfactorily and that we will be able to show an interesting film of the entire trip.

Many of the plants we visited had been partly or completely destroyed by war, and the rebuilding which has taken place since is amazing. We found some of the most modern equipment in these plants alongside ancient, almost antiquated equipment which had been salvaged and was in operation. In some plants we found materials-handling systems comparable to those in our own country; in different sections of the same plants, materials were being moved entirely by hand. These observations have led us to the very belief that the soap and chemical plants in Japan are modernizing just as quickly as possible. Furthermore, we found that the attention being given to the staff and factory personnel is equal to, and in some cases better than, that in the United States. While it is true that wages are very low (less than \$60 per month), we have found that these plants are not interested in losing their employees after they have been trained. Consequently, certain fringe benefits are provided which make employment at their respective plants quite attractive.

Even if not of importance to this report, we believe that the type of construction being employed in these new factory buildings, and in new buildings in the cities, is of tremendous interest. First of all, many of the factory buildings and practically all of the large buildings in the cities have at least one floor, and sometimes more, of basement. All are of reinforced concrete and we noticed that the walls, floors, pillars, and so forth, were of unusual thickness. Many of the large buildings in the cities have three or more floors below ground and all appear to be built so that even the strongest earthquake would have little or no effect on them. One of the new laboratories we visited seemed to have a main or ground floor which was more than 2 feet thick.

Since part of our problem was to survey the tallow market in Japan, we were much encouraged to notice that all of the plants we visited seemed to have substantial excess capacity. Some could easily handle 50 to 100 percent more tallow than they are now processing, while practically all plants could increase their operations by from 10 to 50 percent without difficulty. In addition, we found a definite trend toward the chemical processing or splitting of tallow in the larger plants. These plants not only produce the stearic acid which they use for soap but also produce an extremely high-grade glycerine and an excellent oleic acid. Some of the plants even produce as much as 150 tons monthly of tallow alcohol, which is exported. This situation, of course, is not true in the small operations where the tallow must be used more or less "as is" to produce soap.

Some of these plants are located on canals. Those without canal facilities must still receive their tallow in drums. As mentioned above, the drummed tallow of recent months has shown a marked improvement over that received during the early 1950's. There have been some cases, which I have mentioned above, where shiploads or orders have not been what could be termed satisfactory. Those plants located on canals are able to receive their tallow in barges from which it is pumped directly to their storage tanks. Not all plants have adequate storage tank capacity; some must supplement their bulk shipments by drums. In several instances we were told that additional storage tanks were being constructed and that they would be in operation well before the end of the year. We were asked many questions regarding the proper handling of tallow, both during shipment, during the period of time it is in the barge, and during its storage

in the tanks at the factory. We believe that these questions have been answered to the satisfaction of all concerned and certainly they have been in line with good factory practice in the industry in the United States.

Generally speaking, we were impressed with the intellectual level of the men who are managing these factories in Japan; they are brilliant and experienced. Interestingly enough, each major plant has a laboratory. Furthermore, we were interested to see that in every case one or more copies of the A.O.C.S. methods was available in that laboratory. These directors and managers of the factories stressed their laboratory work and seemed to take great pride in showing us their accomplishments. Mr. Beedle was particularly interested in the laboratories and in the fact that the A.O.C.S. methods were followed as closely as possible and that these factory laboratories were obtaining results which were quite comparable to ours.

The tank truck has apparently not yet invaded Japan. There are two reasons for this; one is the narrow, crowded roads, and the other is the lack of deep water harbor facilities which still necessitate the use of barges. Until these new deep water facilities can be developed, the barges will constitute quite a problem. The manner of handling these barges was a source of much discussion between Mr. Beedle and the surveyors.

The subject of gauging, sampling, and analysis has been covered by Mr. Beedle, whose report follows. I shall add only a word or two. On the subject of drum shipments, we found that their sampling equipment was quite different from ours and that, in our opinion, it was not sufficiently efficient for us to contemplate accepting. However, on receipt of sketches, these men started preparing sampling equipment for themselves, even prior to our departure. Even with the new sampling equipment, they may not adopt our A.O.C.S. methods of sampling. Their method of sampling on an angle results in what we deem a mathematically incorrect answer. This would be particularly true in the resultant computations for moisture and titre. A few paragraphs later I will endeavor to describe our impression of the mental characteristics of these people with the hope that this discussion will explain the difficulty we encountered in trying to induce them to change their methods.

The matter of tallow arriving in bulk is quite another problem. We found that their sampling aboard ship or barge differed appreciatively from our practices. One of the difficulties we encountered was to try to convince the inspectors that their method of sampling was not correct, by our standards, and that a complete core should be taken. Furthermore, we urged that they should use a sensitive thermometer to determine the temperature of the tallow, composite the average temperature, and then take the entire sample to the laboratory where it should be heated to exactly the same average temperature and the specific gravity determined by the use of a pycnometer. Their practice was to take a sample at the top of the tank, one at the middle of the tank, and the final sample 1 foot off the bottom of the tank. After taking the temperatures of these three samples they would strike an average and then attempt, by the use of a hydrometer, to determine the specific gravity of the tallow on board the ship or barge. The experiences of the American Oil Chemists Society to date lead us to the conclusion that their procedure is incorrect. The temperature on

the bottom of the tank not being included in their average, it follows that their determination of the specific gravity would produce a result different from ours. Because of this procedure the difference would naturally show a shortage.

The inspector's group are members of the Japan Oil Stuffs Inspectors' Corporation. We found these men to be very interesting and very intelligent and had the pleasure of watching their sampling of ships, tanks barges, and drums. Their laboratory in Kobe is one of the finest visited during our entire trip. It is a new steel and concrete building comparable to many of the best laboratories in the United States. Fortunately, we were able to get a few high speed black and white movies of the building and personnel. We believe these pictures will speak more than words for the installation.

It seems most important at this point that a few personal observations of the mental characteristics of the Japanese people be injected into this report. These observations will be true not only of the inspectors and surveyors of the Japan Oil Stuffs Inspectors' Corporation, but also of businessmen generally. These men are proud, intelligent, capable, and hard workers. I believe that they are all fundamentally honest and that they value the business which they have the pleasure of doing with others. It must be remembered, however, that these businessmen are also stubborn. We have seen this not only in the laboratory, in the sampling of ships and barges, but also in the hotels, offices, and factories. The Japanese are quick to adopt the practices of others if they think these practices will benefit them. Quite often, however, in their adaptations of these practices they alter them to fit their own needs or equipment. It is this practice of altering the customs or methods of others which has led to the majority of differences between the Japanese importers and consumers of tallow and the American producers or exporters of tallow. These altered practices will produce results. Most often, however, the results are different from those obtained in the American laboratory following the A.O.C.S. methods. Remember, again, that they do obtain an answer even though this answer may not be the same as ours, and that once having obtained this answer, it is a most difficult task to persuade them to change their practice. This difficulty is rather easily explained. Being proud, the Japanese do not wish to admit that they have made a mistake. This they would consider a "loss of face." On the other hand, we in the United States are usually quick to acknowledge an error and to change our practices so that our results will be either correct or in line with accepted procedures. This unfortunate Oriental situation is the reason why we had such difficulty in trying to convince these people that the hydrometer was not sufficiently accurate to determine the specific gravity of tallow, and, furthermore, that it should not be attempted aboard ship or barge where the operator and the barge or ship was constantly moving due to the action of the sea or canal. This same characteristic is the cause of many hours of discussion on certain points in our Trading Rules which we in the United States would have dispatched in as many minutes.

Earlier in our report we mentioned our industry meetings. We were absolutely amazed at the thoroughness of the preparation of the committee. There seems no better way to explain this than to incorporate in this report a copy of three of the papers handed to us at the first meeting.

The first is a copy of the introduction by the chairman of the sub-committee. Fortunately, they had copies of these remarks for us in English. Because of its interest it is incorporated herewith in complete detail.

1. As the chairman of the sub-committee establishing rules of tallow trading between the United States and Japan, I would like to say a few words.

We are very glad to have you, Mr. Mortimer of the Chairman of the American Renderers' Association and Mr. Beedle of Gooch Laboratories here with us and discuss about the matters of the American tallow. If you take this opportunity and see our soap factories actually and make a deeper and better understanding between the consumers and suppliers, it will surely be a great meaning to us as well as to you American Renderers.

2. I would like to present you the data of the tallow consumption of the recent years in this country. Average consumption of the tallow between 1934-1936 was 11,055 tons, but the consumption of the tallow increased every year, showing the following data:

1951	31,624 tons
1952	67,879
1953	103,363
1954	98,007
1955	120,382

The data show that the steady increase of the consumption. Out the above figure we assume that about 3,000 tons of the tallow are our domestic production. And the rest of the amount we depend almost entirely upon the American tallow.

From the figures of the Foreign Agricultural Circular of Foreign Agricultural Service, the following figures were presented:

1950	Total export of U.S.A.	268,307 tons
	(To Japan:	17,910 tons, 6th of the rank of individual country)
1951	Total export of U.S.A.	269,209 tons
	(To Japan:	28,340 tons, 3rd rank)
1952	Total export of U.S.A.	374,148 tons
	(To Japan:	67,540 tons, 1st rank)
1953	Total export of U.S.A.	598,503 tons
	(To Japan:	108,806 tons, 1st rank)
1954	Total export of U.S.A.	590,813 tons
	(To Japan:	98,000 tons, 2nd rank to Holland, 107,750)
1955	Total export of U.S.A.	645,900 tons
	(To Japan:	106,465 tons, 2nd rank)

As you may see from these data you may see that Japan is a good customer to you, American Renderers. At the same time you are good suppliers for our most important raw material, tallow.

3. The production of soap, which consumes tallow chiefly, is presented as follows:

The production of Soap in Japan

Year	Production (tons)	Rate of increase
1952	150,243	100%
1953	191,878	127% (Compared with the previous year's production)
1954	237,276	124% (Compared with the previous year's production)
1955	279,177	118% (Compared with the previous year's production)

As shown in the above list, the increase of the soap production in Japan increases each year by a rate of about 20%. The consumption of soap per capital is still small compared with that of the other civilized foreign countries, but it may increase rapidly as the economic power of this country increases and the living standard of the people rises. As the production of soap increases the raw material of soap, chiefly tallow, may increase accordingly.

As we, soap makers have great concerns with securing desired quantity, quality, prices and smooth trading of tallow.

4. Before the Second World War, we were able to secure a large amount of whale oil, and fish oils and we do not depend upon tallow as much as we depend upon it now. We were importing tallow from Australia before the war. But today we utilize whale oil and fish oils as edible oils and we import tallow from the United States as the industrial oil as I mentioned before. At this occasion I like to look back the situation of importing tallow from Australia, at that time we could secure almost any grade we wanted to and we had not almost any trouble at all.

As for the tallow from the United States, we often met troubles. We asked importers to settle the matter. The importers of this country negotiated with the tallow exporters of the United States. But we could not get satisfactory results.

I heard that the United States took up this matter and established rules of Regulating Business Among Members of the New York Produce Exchange in Animal Oils and Fats.

We hope that we should establish the similar rules between the two countries to negotiate the claims of the tallow import business. We like to emphasize this point particularly and like to call your attention.

5. Causes of the Claims

Any indeficiency in contracting? Any discrepancy between the methods of analysis between the two countries? Any difference between sampling methods of the two? The most great cause of the claim, I think is the terms of contract. I mean we should contract with basis of the final analysis data at the importing port instead of the shipping place.

Because we do not keep the sample of the imported tallow at our hand to be compared with. We do not have any means to know whether the tallow imported have passed the examination at the shipping place.

Again, we can think the tallow, even if passed at the shipping place, may undergo rancidity or degradation, during the transportation.

Fortunately we had a chance to meet together here, representing examiners of Oil Testing Station, trading companies as contractors of tallow import, as well as soapers as the consumers of tallow and I propose to discuss the matter very frankly about the causes of dispute and try to find out the best way to settle the matter.

I sincerely desire to minimize the cases of dispute and reach to the satisfactory conclusion each other.

Hereby, we would like to submit our proposals in separate sheet to you for your reference of discussing the dispute.

6. We hope to import tallow of superior quality and manufacture better grade products. We hope to get tallow at reasonable price so that we may be able to supply soaps of low price. In this way we can expand our tallow consumption and we import more tallow from the United States.

Production of tallow in the United States is increasing every year. On the other hand, the consumption of tallow is decrease on account of the increase of detergent production. As for the consumption of tallow in this country is increasing every year as mentioned before.

We hope that you the representatives of the renderers of the United States should carefully inspect each soap plant so that you may be able to disclose the best way of trading with our country.

7. According to the schedule of this committee, there will be two more meetings and we trust that we may be able to get the final conclusion to our satisfaction each other, before the end of the third meeting.

Today, we like to express our questions and ask your opinions. At the next meeting, August 9, inst., we expect your proposals as the means of settling the dispute.

Now we like to express our questions and begin the discussion:

After presenting us with this more or less formidable document, and having the pleasure of listening to it in Japanese we received what I call Paper No. 2. This is entitled, "Problems Involved in American Tallow Claims and Their Terms of Adjustment Requested." Also, because of its interest it is made a part of this report and follows in complete detail.

"THE JAPAN OIL & FAT PROCESSING INDUSTRY
ASSOCIATION - THE OIL & FAT IMPORTERS &
EXPORTERS ASSOCIATION

PROBLEMS INVOLVED IN AMERICAN TALLOW
CLAIMS AND THEIR TERMS OF ADJUSTMENT
REQUESTED

1. Request port of discharge as final
2. Re: Decoloration
Clarification of "U & U".
To specifically stipulate when chemicals such as anti-oxidants and etc. are added.
3. Re: Testing Method
To be carried out in accordance with AOCS. Of the two methods of decoloration test - "Bleaching Test" and "Refined & Bleached Colour Test" - request that the former be adopted.
4. Re: Acid Value
There is a close connection between acid value and decoloration. Particularly, decoloration of color due to heating is difficult. Though there are various causes concerning rise in acid value, we feel that there is a necessity of reaching mutual understanding concerning heating temperatures when loading and unloading as well as in transit.
5. Re: Weight Shortage
Extremely prevalent this year. Request weight inspection at port of discharge as in the case of palm oil.
6. Re: Hardness and Iodine Value
Request stipulation of iodine value since frequently provisions for hardness do not guarantee iodine value.
7. Re: Drums
Request that special attention be paid to drums due to insufficient cleaning and faulty drums in the past.
8. Samplings
Request detailed explanation of how sampling is actually carried out at port of loading. Request that samples be always sent together with each shipment.
9. Standard for Adjusting Claims
See attached sheet

STANDARD FOR ADJUSTING IMPORTED TALLOW CLAIMS

1. Quality Inspection Items
Items to be restricted to:
 1. F.F.A.
 2. Color
 3. Titre
 4. M.I.U.
 5. I.V.
2. Agent for Quality Inspection
Authorized Surveyor in Japan specified on sales contract be designated.
3. Samplings
To be conducted at delivery point as specified in sales contract.

4. Inspection Method
Method to be used as practised by authorized surveyor stated in "2" above.
5. Discount Rate and Allowance Limit
Discount rate and allowance limit as stated in supplement when quality inspection do not meet contract provisions. However, when wide differences exist in contract terms, the right of buyer to reject delivery. (In respect to concrete conditions, the present New York Commodity Exchange transaction provisions for rejection of delivery of animal oils and fats be applied accordingly.)
6. Period for Submitting Complaints.
Within five days after receipt by buyers of quality inspection certificate from surveyor stated in "2" above.

SUPPLEMENT

1. F.F.A.
To be discounted at the rate of 2% of contract price per increase of 1% over contract stipulation. However, for bulk shipment 1% difference in contract be allowed.
2. Color
To be discounted at the rate of 2% for each increase of 1 FAC color contract terms.
3. Decoloration
When decoloration is guaranteed, to be discounted at the rate of 2% of contract price for each unit increase of Red as measured with 5-1/4 inch Lovibond Colorimeter.
4. Titre
To be discounted at the rate of 4% of contract price per rise in 1 degree Centigrade when less than contract stipulation.
5. M.I.U.
Amount to be discounted correspondingly in accordance with contract price as standard for each increase in contract terms.
6. I.V.
To specify I.V. for Extra Fancy, Fancy & Bleachable Fancy and Prime as follows and to discount 4% of contract price per increase in I I.V. value.

Extra Fancy	(Min. 43°C) Max. 45
Fancy & Bleachable Fancy	(Min. 41.5°C) Max. 48
Prime	(Min. 40.5°C) Max. 51

(End of Quote)

As will be noted, the first group of 9 items can be considered both as a request for changes or deviations in our customs and for information from us regarding our methods. We were advised that we did not have to answer these points at this particular meeting but that they would like for us to do so at future meetings. This was done, and for your information I will give here just a brief outline of our replies.

Number 1 requests port of discharge as final and, unfortunately, we had to deny that request. I say, unfortunately, simply because that is Number 1 on their list and it is difficult to have to make a denial on their first item.

Number 2 was answered by Mr. Beedle and is covered in his report. In reply to their request regarding the stipulation when chemicals such as anti-oxidants are added, we certainly agreed.

Number 3 was easy to explain. We simply used the A.O.C.S. book and advised them that the simple Bleaching Test was not used at the present time. Our Stateside domestic consumers use the Refined and Bleached Color Test, commonly referred to as the R. & B. Test.

Number 4 was quite simple. Both Mr. Beedle and I spoke briefly on it.

Number 5 is the weight shortage and I believe that we have uncovered the reason for it. This has been mentioned in earlier paragraphs as the use of a hydrometer on the barge or ship rather than pycnometer in the laboratory and the improper sampling of tanks. This has also been covered by Mr. Beedle in his remarks.

Number 6 is regarding the Iodine Value. This was a long discussion but Mr. Beedle feels that he has answered it to their satisfaction.

Number 7 is a request and seems to be in order. We have again requested specifically that all of our people give great care to the cleaning of drums and to making sure that all drums are sound.

Number 8 was explained in detail by Mr. Beedle and their request for samples being shipped together with the shipment was agreed upon by both of us. They would like to have at least a one-half gallon sample with each shipment whether in bulk or drums.

Number 9, regarding the standards for adjusting claims, was a subject of prolonged discussion at both the second and third industry meetings. As mentioned previously the Japanese are a stubborn people and they dislike very much changing their procedures, particularly if that change results in their obtaining what they deem to be a lesser settlement. The subject for discussion was the schedule for claims for Free Fatty Acids and Titre in the new Pacific Coast Renderers Association Trading Rules. These new P.C.R.A. Rules set forth a schedule of one-half to one percent for each percentage of excess F.F.A. or Titre. This compares with the past two percent difference being allowed by the New York Produce Exchange Rules. The matter was finally concluded by asking them to submit all of their findings in detail so that the committee could consider them. We pointed out in particular that these penalties or adjustments were not actual penalties but that they were economic adjustments for a loss of either the glycerine value or an additional cost of handling if the producers' material was other than contract specifications.

The second set of questions entitled, "Standards for Adjusting Imported Tallow Claims" and numbered 1 through 6, were dispensed with somewhat simply by informing them that the Pacific Coast will be adopting a new Pacific Coast Renderers Association Rules on September 1, 1956.

Fortunately, this matter of trading rules had been discussed in detail with Mr. Termohlen and we had agreed as to its importance. Consequently, we had obtained copies of these rules and distributed them at the second meeting. This second set of claims was dispatched at the third meeting

after the people who received the rules had had an opportunity to examine them carefully and translate them into Japanese for their own use. The third set of questions marked, "supplement," and numbered 1 through 6 were also resolved in the same manner at the second and third meetings. As the matter now stands, the Pacific Coast Trading Rules are to be the basis of trading between Japan and the West Coast exporters or producers. It is hoped that the Board of Directors of the National Renderers Association will approve and adopt these trading rules so that they will be uniform throughout the United States.

The third evidence of the thoroughness of the Japanese Association was the list of questions which they wanted me to cover in a talk that was scheduled for a future meeting. Because the questions and my answers thereto are of interest and importance to our industry, they are made an integral part of this report.

"Several Points Desired to Make Mention of in Mr. Mortimer's Speech

- 1) The visiting aim and capacity of Tallow Mission.
- 2) About National Renderers Association, and extra explanation of the following:
 - a) Whether packers also have a nationwide organization. If they have, what relation between National Renderers Association and the packers' organization.
 - b) Is there any difference in quality in tallow by packers, and renderers? And number of packers and renderers together with the ratio of their output?
- 3) About trading rule of tallow.
 - a) Whether renderers in 9 districts live up to the trading rule in each district.
 - b) What is the standard trading rule for packers?
 - c) Actual situation of N.Y. Produce Exchange "Trading Rule of Fats and Oils" and that of Pacific Coast applied.
- 4) Domestic trading situation in tallow in your country.
 - a) Trading channel from tallow producers to consumers.
 - b) Whether large consumers such as Big Three in soap industry establish their own specification.
 - c) Actually how do soap makers purchase tallow, position or spot? When is the peak in demand, if there is?
 - d) What connection between soap makers and tallow producers.
- 5) Present situation of production and consumption of tallow and future outlook, with the extra following items.
 - a) New uses and consumption of tallow in America and future outlook.
 - b) Outlook of tallow consumption for soap.
 - c) Outlook of European exports.
 - d) Whether there is seasonal fluctuation in tallow production.
 - e) Production by grade.

6) Opinions on the Japanese tallow buying and handling of tallow in factories in Japan, viewed from your eyes."
"Speech to Tallow Industry, Tallow Traders, and Tallow Inspectors, August 10, 1956

Gentlemen: It is an honor and a pleasure to meet with you and to have an opportunity of discussing the rendering industry in the United States. We are much impressed with what we have seen to date in Japan, and particularly with the efficiency with which your associations operate.

In my notes I find several things which should be of interest to you. The first is the information regarding our mission. We are operating under a joint contract between the National Renderers Association and the United States Department of Agriculture, Foreign Agricultural Service. The purpose of our travels is to survey the market in Japan for tallow, to see if we can develop or encourage any new uses for tallow, and finally to see if we can help to solve any of the differences which might exist between your people and our people.

With the thought in mind that you might like to know something about our National Renderers Association and the way it is organized, I have taken the liberty of bringing a copy of our by-laws. This copy I am pleased to leave with you. Further, it is a pleasure to say that our Association counts as its members 95 percent of all of the independent rendering companies in the United States. As I mentioned at our first meeting, the United States is divided into 9 areas, each area having its own association and electing two national directors. The National Association consists of these 18 directors, plus the principal officers, president, first vice president, second vice president, secretary-treasurer, and executive director. If there are any additional questions regarding this organization, I will be glad to discuss them with you at the conclusion of our meeting.

The question has also been asked if the packers have a nation-wide organization, and if so, what the relationship might be between their organization and our organization. The packers have several organizations - one is the American Meat Institute, another is the National Independent Meat Processors Association, and still another is the Western States Meat Packers Association. These packers associations are all independent of each other and completely independent of all of the rendering organizations. A few of the individual members of our 9 regional areas belong to some of the packer organizations only as associate members.

Another fact which has been brought up for discussion is the question of a possible difference in quality between the tallow produced by packers and renderers. In some parts of the country, the packers produce a better quality of tallow than the renderers. In other parts of the country, the renderers produce the best tallow. In all cases,

it will be found that both packers and renderers frequently produce at least two, and sometimes more, different qualities of tallow. It is also interesting to note that the quantity of tallow produced by the members of the National Renderers Association is approximately equal to the amount produced by all of the packers in our country.

The next matter of importance which I would like to discuss is the subject of our new Trading Rules. Fortunately, I have been able to give your Mr. Sato a copy of these rules, and you will notice that they have been produced, copyrighted, and approved by the Pacific Coast Renderers Association. Furthermore, it is of interest to you to know that these are new rules and that they will not become effective until September 1 of this year. This date is only three weeks away, but it will still give all of our members ample time to examine the final printing and to plan their operations accordingly. In the beginning it is expected that only the members of Area 9, which is the entire Pacific Coast area, will operate under these rules. In the future, it is fully expected that the National Renderers Association will adopt the rules, and in that case the entire membership or our National organization will operate under these rules. In addition to a copy of the rules, I was pleased to give Mr. Sato a copy of a letter of August 3 from the chairman of our rules committee, Mr. Herrgott. That letter points out that certain sections of the rules do not apply between exporters and overseas buyers. I am sure that Mr. Sato has prepared a translation of the letter for you, and if you have any particular questions I will do my best to answer them.

The question has been asked regarding the standards or trading rules for the packers. In most cases the packers follow exactly the same trading rules as the renderers for a very simple reason. Tallow is the principal production of the renderers, while it is only a by-product of the packers. The packers feel that the renderers are in a better position to create a set of rules than they are and are glad to work with us.

You might be interested in a slight comparison of the Pacific Coast Renderers Association Trading Rules and the Trading Rules for animal fats and oils of the New York Produce Exchange, and if you wish to make your own comparison, I will be glad to loan that copy to Mr. Sato for translations. I must, however, request that it be returned to me as soon as you have finished your translation. I may say that the New York Produce Exchange Trading Rules are very open and that they are not nearly as specific nor in as much detail as our new rules. Our new rules have been studied for a long time, and we feel that they will fill a most important need.

As mentioned above, we feel that all exporters on the West Coast will work under the new Trading Rules beginning September 1. We hope that the East Coast brokers, dealers, and exporters will adopt them before the end of the year.

Another subject which is of much interest to you as businessmen in Japan is the manner in which tallow is traded in our domestic market in the States. You will be interested to know that almost all of the tallow purchased by consumers is purchased through brokers. The brokers act as a market for the tallow, bringing the Buyer and Seller together. These brokers communicate by telephone with the Buyer and Seller at very frequent intervals, at least three or four times each day. They keep each buyer and seller well advised as to the market and supply demand for tallow. In addition to domestic news, they also keep our consumers and producers advised of foreign news.

So far as we know, there has only been one case in which the large consumers, such as, Procter & Gamble, Lever Brothers, Colgate, and so forth, have tried to establish a specification of their own. This was the case of Bleachable tallow which was originally established by Procter & Gamble after World War II. After the war, it was found that the machinery of many of the smaller renderers was in a bad state of repair. The result was that their tallow did not meet the specifications of Regular Fancy. In some cases, it did not meet the specifications of Prime tallow. Procter & Gamble found that this tallow would bleach well, so they established the name of Bleachable Prime. This tallow called Bleachable Prime had almost any color FAC, a reasonable acid, FFA, and also contained the quality of being quite bleachable, down to at least 2-red on the Lovibond Scale. As frequently happens, the normal course of events resulted in the word, Prime being dropped, and the term now is referred to simply as Bleachable.

For your information, the large soap makers purchase tallow exactly as do the small soap makers. Most of them will buy only as needed, or "spot." Some of them will establish a position or a policy of taking so many cars per month, the price always to be determined as of the day of shipment. That price is subject to negotiation between the Buyer and Seller with the broker acting in the middle on the day the tallow is shipped. There seems to be no particular time when there is a big demand for tallow. The demand is consistent throughout the year, with the exception of the month of July when many of the big soapers close down for vacations.

The question has also been asked regarding the connection or relationship between soap makers and the producers of tallow. With one exception, there is no connection between these people. The tallow producers for the most part are independent businessmen who own their own businesses and property, and in many cases these businesses have been handed down from father to son.

Of tremendous importance to you people as importers of tallow is the present situation regarding the production and consumption of tallow in the States. Both the production and

consumption is improving. The production is improving because of the very large cattle population and the enormous number of cattle being killed for our own market and export. The consumption is increasing because of the normal increase in our population and because of new uses which we are finding for tallow and which will be covered in my next statement.

Our National Renderers Association is spending thousands of dollars each year in research. This money is being spent with National Research Laboratories and with Universities and Colleges throughout our country. So far, we have developed two important new uses. One is for the manufacture of plastics and plasticizers from the oleic acid fraction of tallow, and the other is the use of tallow as an additive in the feed for poultry, cattle and swine. The first mentioned new use is extremely technical and not being a chemist or a professor, I will not dwell too much on it. The other new use, that of feeding, is very simple. We have found that approximately $2\frac{1}{2}\%$ tallow added to poultry feed, with feed ration properly adjusted for the added carbohydrate, produces chickens for market in at least ten percent less time, and by using at least ten percent less feed. In some cases, these percentages have been better than 15%. In regard to cattle and swine we find that between five and ten percent can be used with the same efficiency. It must be remembered, however, that the combined diet of the bird or animal in question must be properly adjusted by your nutritionist. I have also brought with me some booklets regarding the storage, handling, and mixing of feed, regarding new information on fats in feeds, and regarding stabilization. Copies have been handed to Mr. Sato, and we have a few extra copies in the Office of the Agricultural Attache, here in Tokyo. Also, if more copies are needed I can obtain them for you at no cost.

The outlook for tallow in the soap kettle in our country is very good. We find that more tallow is being used for soap in 1956 than in 1955, and that more was used in 1955 than in 1954. This percentage is not large and is based on the normal increase in population. We rather look forward to a good future market. The European situation is also sound, and we are now exporting more tallow to Europe than ever before. The Europeans are not producers of tallow in sufficient quantity to take care of their own needs and consequently must import from countries which are large producers. The new uses which we are discovering for tallow are proving of interest to the European people, and they also are beginning research on the subject.

The production of tallow is somewhat seasonal, although the fluctuation is not large. Normally in the United States because of summer heat, less meat is used than in the wintertime. Consequently, the production of tallow in the summer months is not as great as in the winter months. This is

strictly normal, and I am sure that you understand the position. The different grades produced by the nation as a whole may be of interest to you. It is my opinion Regular Fancy, Bleachable, and Prime constitute the grades produced in the greatest quantities. In all probability, Bleachable will hold number one position, Regular Fancy No. 2, Prime No. 3, Special No. 4, Extra Fancy No. 5. In certain parts of our country, particularly the Middle West, much low-grade tallow is produced. This quality is referred to in our Trading Rules as No. 1 Brown tallow, or No. 2 Brown tallow.

In closing, I would like to express an opinion or two on the handling of tallow in Japanese factories and the manner in which you buy your tallow. So far as buying is concerned, we all know that it would be very much to your advantage if the Japanese Government would return tallow to the former Automatic Approval basis, thereby permitting you to make a purchase of tallow whenever it was needed. This would undoubtedly make it easier for your importers and also for our exporters. In regard to the handling of tallow, I find some matters on which I would like to compliment you and some which I think need improvement. Taking the latter first, I believe that your officials should work very carefully with Mr. Beedle, particularly in regard to the cleaning of barges, tanks, pipelines, and so forth. Tallow, particularly in hot weather, can very rapidly turn rancid. This is especially true if the tallow contains more than a very small amount of moisture. This moisture combines with the enzymes in the tallow and causes a splitting action which increases the free fatty acid and destroys the glycerine. In our country, we are very careful to see that our tanks, our tank cars, and our tank trucks are cleaned thoroughly after every use. Naturally, we use them continually. I must point out that if you are not going to use a barge or tank, you should not remove the tallow from its walls until you are ready to use it. You can realize that if this is done, the tank is likely to rust. In the factory, we found that your people are very clean and that you handle your tallow efficiently. We have been much impressed with the high quality of your bar soap and your powdered soap. We can readily see that your factories have sufficient capacity to handle increased amounts of tallow, and we hope that the future will provide an opportunity for you to buy large quantities from our producers in the United States. Thank you again for the pleasure of being with you and for your kind attention in listening to my remarks. At the conclusion of the meeting I will be glad to answer any question you may have.

Because of the very tight schedule prepared for us by the Japan Oil and Fat Processing Industry Association, I felt that many questions had to be skipped because of the lack of time. Considerable time was spent discussing what we might term as rather elementary questions. Nevertheless,

the matters were considered of importance by our hosts and we did our best to answer them patiently and in detail. As a result I requested, and was fortunate in having, a fourth Industry meeting arranged for August 31, 1956. In view of the fact that the Association had provided facilities for the other meetings, we arranged quarters for this final session. The meeting convened at 1:00 P.M. and lasted until 4:30 P.M. The attendance was excellent and time was ample to permit everyone present to be heard. It is our opinion that this final meeting produced a better understanding than any of the earlier sessions.

Probably the most important point discussed at this meeting was the Japanese understanding of "One Lot" of tallow. It has been the custom in the United States, on all oils, for dealers and exporters to accumulate drums of Oil or tallow from several producers. Occasionally oils or tallows of different colors, odors, or qualities are acquired and assembled together in one large lot. When these drums are samples, the combined sample produces a final result which is equal to, or better than, the contract. This large lot of several thousand drums is then shipped. When the material reaches Japan, or the port of destination, a small soaper, for instance, with an order for a "lot of 50 drums" has frequently found 7 or 8 drums out of the total number of 50 to be bad in color or acid, and actually unusable to him because of his method of operation. This results in a sizeable financial loss to a small operator. These men were not aware of the practice mentioned above and consequently were somewhat surprised that it was practiced in all oil shipments from the United States or even from other countries. When we explained the procedure they had a suggestion or two which they would like for us to consider. Some of the suggestions we cannot follow or adopt at the present time. One suggestion was that the exporter in the United States or the importer in Japan inform the broker of the total number of drums for each customer so that the lot in question could be obtained from a single producer. These should have a distinguishing mark, or series of numbers, so that on arrival in Japan they could go to a specific consumer. This, of course, would involve additional cost and I told them that they would have to be willing to bear this slight burden. If the cost was not excessive, they said they would rather do this than lose one or more drums of tallow because of the practices followed as a general custom and as described above. Another suggestion was that the dealer accumulate the tallow in bulk, thoroughly mix it, and then drum it. The soap people realize that this might possibly necessitate the acquisition of bulk facilities by these American exporters or dealers who at this moment are not so equipped. It is their feeling, however, that we should value their business sufficiently to take the necessary steps to eliminate the arrival in Japan of drummed tallow which fails miserably to meet specifications.

The above last point is reiterated because of its frequent mention by the Industry people. We were careful to explain to the meeting, and to all of the meetings, that any deviations from normal, such as the acquisition by exporters of individual lots covered by individual sampling and analysis reports, and so forth, would be rather costly and that the purchaser and/or user would have to pay for these additional charges. We did say that we would endeavor, to the best of our ability, to work with

the producers and exporters to see if the conditions which have been bothering the small soapers in Japan could be eliminated. Naturally, the small soapers in Japan could be eliminated. Naturally, the small soaper is not the only one who was bothered, even the large soapers are disturbed when they receive a few drums in a shipment which are out of order. In view of the fact that these are mostly West Coast matters, we proposed a meeting of these West Coast people for the purpose of explaining our findings and urging cooperation among all.

Numerous other interesting items were brought up for discussion and answered to the best of our ability. We believe that these answers satisfied the customers and that the producers in the States will accept them in the spirit in which they were given. All can rest assured that the answers are in line with good factory practice. They cover such items as, claims for off-color drums, requests for a standard number of decimal places when converting pounds into kilos, requests for care in stenciling and lacquering the heads of the drums so that they can be read when they arrive in Japan, and other matters which can be taken care of by normal care when the drums are being selected, cleaned, filled, and so forth, at the factory or drumming depot.

One interesting question which I believe merits specific mention was whether or not the buyer could specify his own laboratory. We advised them that they could if they were willing to pay the charges because sometimes the laboratory specified might be at some distance from the point of shipping or from the producer. Another question along the same line was whether or not a buyer's representative could be present when the lots were sampled and analyzed. Mr. Beedle answered that the representative could be present at the sampling, providing he was there on time and did not keep the laboratory man waiting. Mr. Beedle further advised that the laboratory was usually crowded and busy. Following this meeting, Mr. Beedle and I had an opportunity of discussing with members of the Inspector's Corporation many points of mutual interest. We believe that we have reached a favorable understanding and one that has heretofore been missing.

Before getting too far away from the discussion of the laboratories and sampling techniques in general, we regret that we cannot at this time recommend that the laboratories in Japan be authorized or recognized as official tallow inspection units. This recognition must of necessity be postponed until such time as our National Renderers Association adopts the policy of recognizing or authorizing certain laboratories as official tallow inspection units. In addition, a further visit by a competent A.O.C.S. chemist will have to determine the extent to which the Japanese laboratory officials have adopted the A.O.C.S. methods of sampling and analysis. Unfortunately, a letter dated September 8 from the chairman of the Negotiation Committee of the Japan Oil & Fat Processing Industry Association and the Oil & Fat Importers and Exporters Association leaves doubt in my mind as to the willingness of the Japan Oil Stuffs Inspectors' Corporation to adopt the A.O.C.S. methods. This is a matter of extreme importance and must be settled to the satisfaction of all concerned.

Also, while on the subject of laboratories both Mr. Beedle and I wish to suggest and recommend to the Board of Directors of the National Renderers Association, and to all regional areas, that the National Renderers Association consider the appointment of certain laboratories as official

tallow surveyors and analysts. This approval or designation as official, to be granted only after the appropriate A.O.C.S. committee has visited the laboratories and personnel in question and has certified them to be satisfactory. Naturally, the laboratories will have to maintain this status. This policy is followed by other associations in the fat and oil field and is one which seems to merit considerable thought. It is our belief that laboratories or surveyors so certified would add considerably to the prestige of our Association. This is a matter of considerable importance and should be discussed at great length with our Board of Directors before any recommendation be made.

Another very important suggestion which, incidentally, has been made at different times by both industry and government officials in Japan, is that a liaison committee or individual be established in Japan to work through the Agricultural Attache's office on all fat and oil matters. This committee or individual would, of necessity, have to be familiar with animal fats such as tallow, grease, lard, etc., vegetable oils such as cottonseed oil, soybean oil, linseed oil, etc., and would also be required to have definite training on such subjects as markets, selling, contracts, sampling, analytical procedures, and so forth. At this writing it is thought that an individual might be satisfactory and even preferable, that this individual should be an American, and that he should work with and perhaps through the Agricultural Attache's office. He should be a person of unquestioned integrity and should have the ability to handle the Japanese people. It has also been suggested that the expense of this matter might be covered under PL 480.

The industry meetings held in Osaka and the visitations in Osaka, Kobe and Kyoto were comparable to those held in Tokyo. Consequently, there will be no necessity of going into detail regarding those particular meetings. We were, however, much impressed by the presence of Mr. T. Miyazaki, who is Vice President of the Association for the Osaka area and of Mr. S. Fuchigami, Director of the Osaka Branch, at the Osaka airport when we left for Tokyo. These gentlemen read a prepared statement to us which was very touching. They seemed to greatly appreciate our efforts in their behalf and, like all others, had no hesitancy in saying so. They even went so far as to state that they hoped that our two associations might combine and work together for the future development of the fat and oil industry.

At this point in the report I would like to mention that there are several tables attached which should be quite self-explanatory. Table No. 1 shows the soap and detergent production from 1951 through the first half of 1956. Table No. 2 shows a breakdown of the soap production in the various districts in Japan for 1955. Table No. 3 gives the present status of soap production in various sized factories in Japan for the year 1955. This data was furnished to me by the Japan Oil and Fat Processing Industry Association and I have every reason to believe that it is correct.

Before concluding this report, I feel that it is only fitting and proper that due thanks be given to Mr. M. A. Drisko, of the Livestock and Meat Products Division of the Foreign Agricultural Service of the USDA in Washington, D. C., for his help in making this trip possible. I also wish to personally thank the Board of Directors of the National Renderers Association and our industry. It is my considered opinion that we have done

much to improve the relationships between the American producers and exporters and the Japanese consumers of tallow.

It is true that this report has not said too much regarding the additional uses of tallow in Japan. The capacity for this increased use is available and we have started negotiations which should prove effective in future years. Some of the circumstances, which have been explained in this report, have definitely limited the past consumption of soap in Japan. Fortunately, these conditions are improving and it is our firm belief that future years will see Japan rising from the 27th place as a user of soap to a position at least in the first ten. We, therefore, recommend that continued assistance be given to sound programs which might accomplish this end.

The research program of the National Renderers Association has been of tremendous interest to all industry and association members in Japan. They have asked for and have received copies of our studies on the use of fat and feeds. The raising of poultry in Japan is rather important, particularly, for the production of eggs. Chicken is frequently served in restaurants in the larger Japanese cities. We have been advised that there are some rather substantial poultry farms in Japan and copies of our booklets have been directed to them.

The use of tallow in the various chemical plants is growing in volume almost monthly. They are interested in the findings of our research work and have asked that they be advised as soon as we are in a position to do so. We were delighted to find organizations with tremendous equipment along these lines and they were doing very fine work in the production of glycerine, stearic acid, oleic acid, and fatty alcohols. Amazing, also was the office equipment in one of the companies which we visited. This organization had a complete room outfitted with electronic computing machinery of the very latest American make. At the same time, on the desk of the operator, the little Japanese abacus was quite prominent.

We feel that the results of this trip will be felt for years to come in the United States and Japan, and that they will be satisfactory to all concerned. They are results which can be neither predicted nor tabulated, but we feel certain that a finer understanding has been reached between the producer and consumer. We further feel that when the Japanese Government places tallow back on the automatic approval list that many of the inconveniences which have caused difficulties, particularly with the small soaper, will be eliminated. Furthermore, it is quite evident that with the continued help from the United States Government, and particularly under PL 480, that the soap makers and the users of tallow in Japan can increase the amount of tallow imported from the United States. This increased amount is not going to be large to begin with, but as the general economy improves it should be substantial.

In connection with this entire project, there are two very important things which I recommend be done and followed as nearly as possible:

Point No. 1 is that the National Renderers Association and all of the associated regional area associations, through their directors to the National Association should become as thoroughly acquainted with this situation as possible. It is my belief that this can best be accomplished by means of special sessions of the Board of Directors of the National Renderers Association at which time nothing but this particular project be discussed. All details, photographs, et cetera, to be shown and

discussed at length so that each member of the Board will have as clear a picture of the situation as it is possible for us to convey to him. It is my belief that this meeting might possibly require one or two full days. Following this meeting, I would recommend that each of the directors discuss the matter at length with all of their regional area members. In this connection I will be more than glad to assist in any way possible. There are many items which, if followed through by the actual member, will produce results far above the expectation of the individuals concerned. I cannot emphasize too strongly the importance of this cooperation by the individual members. It is my earnest desire that everyone take this matter as seriously as we do because only by this attitude will our results be complete.

Point No. 2 is that the Department in Washington should grant us sufficient time to make a full and complete report to them, in person as well as in writing, and that they should then be ready to continue cooperation as recommended. We hope that members of the Department in Washington are in favor of a continued cooperation between our producers and the Japanese consumers and I can assure you that all of the industry people in Japan, and ourselves, feel that this should be the beginning of trips between either American producers or Japanese consumers. As we become better acquainted with each other and with the problems facing the individual operations of various factories, the disputes and claims will drop to a minimum. As a matter of fact, the Japanese association has already asked if a representative from Japan, or a group of representatives, might visit America and its tallow producing companies to see exactly how tallow is handled from the raw material to the final shipping. They have also requested a return visit on the part of a team from the United States.

We feel that we were very warmly received and are most grateful for all of the kindness and favors bestowed upon us. If and when it is possible for members of the Japanese industry to visit the United States, it will behoove all of the producers and members of the renderers associations to reciprocate to the fullest extent with our visitors.

In closing this report I wish to again call attention to my remarks at the conclusion of the report on Korea. I believe that many of the difficulties which we have encountered have been cleared and that future teams will not be traveling under some of the uncertainties which beset us. Everything considered, however, we have no regrets and are most grateful for the opportunity for serving not only our industry but our country.

TABLE NO. 1

Soap and Detergent Production in 1951-1956

<u>Soap</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956 (Jan.-June)</u>
Toilet Soap :	36,779:	38,155:	45,481(119):	51,595(113):	56,361(109):	27,758(103)
Laundry Soap :	90,040:	92,447:	122,223(132):	153,956(126):	179,010(116):	86,747(102)
Textile Soap :	7,085:	6,079:	6,862(113):	6,639(97):	7,406(112):	3,485(102)
Industrial Soap:	1,944:	1,665:	1,234(74):	1,646(113):	2,251(137):	929(103)
Powdered Soap :	10,218:	11,255:	15,347(136):	22,746(148):	33,373(147):	20,611(137)
Others :	861:	622:	731(118):	694(95):	770(111):	299(83)
Total :	<u>147,827:</u>	<u>150,243:</u>	<u>191,878(128):</u>	<u>237,276(124):</u>	<u>279,177(118):</u>	<u>139,829(106)</u>
<u>Detergent</u>						
Mineral Base :	1,972:	3,086:	3,535(114):	3,110(88):	4,065(131):	3,398(174)
Alcohol Base :	3,059:	4,465:	7,316(164):	9,121(128):	11,604(125):	6,340(108)
Total :	<u>5,031:</u>	<u>7,551:</u>	<u>10,841(144):</u>	<u>12,231(113):</u>	<u>15,471(127):</u>	<u>9,738(125)</u>

Quantity Unit: Tons

Comparative figures of production assumed as 100 for preceding years

TABLE NO. 2 Soap Production in Various District in Japan (1955)

Name of District :	Total Soap : Factories. Production:	Toilet Soap : Factories. Production:	Laundry Soap : Factories. Production:	Powdered Soap : Factories. Production:
:	Percentage:	Percentage:	Percentage:	Percentage
Sapporo :	10 : 2.17%	1 : 0.01%	3 : 1.86%	9 : 7.76%
Sendai :	9 : 1.19	1 : 2.56	3 : 0.48	4 : 3.08
Tokyo :	108 : 47.31	28 : 45.71	67 : 50.55	34 : 39.23
Nagoya :	71 : 5.48	9 : 0.56	46 : 4.12	35 : 12.2
Osaka :	125 : 35.6	43 : 48.08	82 : 31.84	42 : 33.75
Hiroshima :	9 : 1.6	4 : 1.39	8 : 1.94	3 : 0.64
Shikoku :	7 : 0.63	4 : 0.38	6 : 0.54	4 : 1.72
Fukuoka :	20 : 6.02	6 : 1.31	16 : 8.67	6 : 1.62
Total :	359 : 100. %	96 : 100. %	231 : 100. %	137 : 100. %

Present Status of Soap Production in Various
Scale Factories in Japan (1955)

TABLE NO. 3

	<u>1-30 Employees:30-99 Emp.</u>		<u>:100-299 Emp.:Total</u>		<u>:More 300 Emp.:Total</u>		Grand
Number of Factory	:244	:42	: 9	: 295	: 21	: 316	
In Percentage	: 77%	:13%	: 3%	: 93%	: 7%	: 100%	
Capacity	:100,000 tons	:104,000 tons	:48,000 tons	:252,000 tons	:148,000 T	:400,000 T	
In Percentage	: 25%	: 25%	: 12%	: 63%	: 37%	: 100%	
Production in 1955	: 66,444 T	: 58,627 T	:30,152 T	:155,223 T	:123,954 T	:279,177 T	
In Percentage	: 23.8%	: 21%	: 10.8%	: 55.6%	: 44.4%	: 100%	
Percentage of Operation	: 66.44%	: 56.37%	: 62.82%	: 61.6%	: 83.75%	: 69.79%	
Number of Employees:	2,391	: 2,023	: 1,159	: 5,573	: 4,155	: 9,728	
In Percentage	: 24.58%	: 20.8%	: 11.91%	: 57.29%	: 42.71%	: 100%	

To: The United States Department of Agriculture
Foreign Agricultural Service

From: William F. Beedle, President of Geo. W. Gooch Laboratories, Ltd.

Subject: Report on Japan Tallow Survey Mission

Through the cooperative agreement between the National Renderers Association and the Foreign Agricultural Service of the United States Department of Agriculture, it has been my privilege, together with Mr. R. B. Mortimer, President of the N.R.A., to visit most of the Oil and Fat industries of Korea and Japan.

My purpose has been to interchange ideas relative to the most accurate procedure in handling tallow shipments to these countries and my survey has embraced the sampling, weighing and quality determinations of this product.

On several occasions, I witnessed the techniques of the Japan Oil Stuff Inspectors' Corporation (Nippon Yuryo Kentei Kyokai) in these three phases and was gratified to note that, in every case, personnel thoroughly familiar with their type of work were employed.

The most obvious variances with our methods of operation were in the fields of temperatures, determination of specific gravity of the tallow, and sampling.

Bulk shipments of tallow received in Japan are transferred from ships to barges since there are no facilities for dockside unloading or weighing. These barges are strapped and calibrated so that from the innage of the tallow, the temperature and the specific gravity, the weight is computed. We noted that the bottom temperature was read, not at the bottom level as is our custom, but at one foot above this level. Since an average temperature which is used for computation is obtained by readings from bottom, middle and top levels of oil, the Japanese average temperature would be higher than our own because the reading one foot above the bottom level would be higher than that at the bottom level. Obviously then, their computation would show less outturn and this might account for some of their reported shortages. They seemed to appreciate our explanation of this possibility and on a subsequent shipment used our method.

Also, the Japanese, to determine the specific gravity, were using a hydrometer right at the barge which is hardly the place for an operation to obtain such an important result. We have found the hydrometer to be insufficiently accurate for determining the specific gravity of a commodity of such value as tallow, and explained our use of a pycnometer in the laboratory for this determination because of its greater accuracy. However, in their minds, this departure from their method is still debatable.

In sampling, the Japanese were taking bottom, middle and top samples of the tallow where we would take an entire core composite of full depth. We discussed this with them and they were agreeable to following our procedure.

Considerable time was spent in explaining the importance of a complete inspection of the ship during and after the discharge of tallow when a shortage has occurred in transit. This is most necessary when a claim is

being made in order to define the responsibility for the shortage, and in such an inspection the bulkheads should be carefully checked for leakage, in so far as that is possible; the double-bottom tank should be pressed up and inspected under sufficient head to show leakage if it has taken place; and if moisture is found in the oil, the steam coils should be checked under pressure. The Japanese seemed most impressed by our thoroughness in these respects. The barges that I saw after unloading seemed well cleaned, with no more than the expected tare for this type of commodity. We recommended, too, that barges used in the transfer of tallow, when they were to be held empty for sometime, should be washing out and dried thoroughly just prior to the loading of the next cargo; and that a barge that is in service on low-grade tallow, even though the interval between usage be short, should be cleaned each time if it is to receive a higher grade product.

In drum sampling, which we had the opportunity to witness only once, we found that instead of using the conventional trier - open faced or double-barrel - an auger was used. It happened that this tallow was of a mushy consistency and this type of sampler was not efficient because a part of the tallow ran off of the auger while it was being withdrawn from the drum. We called their attention to this and described our equipment, furnishing them with sketches of the types of samplers we use for tallows of varying consistencies. They were pleased to get this information and immediately began to design their own equipment after our patterns.

Another difference was noted in their drawing of random samples instead of the prescribed 10% over the entire lot. This we also discussed with them and we found them amenable to following the prescribed method.

Some of the most pertinent topics which I was called upon to discuss within the meetings held with the Japan Oil and Fat Processing Industry Association, I submit below:

1. Q. What about Fat and Oil surveying organizations in America?

A. Edible and inedible fats are usually handled by organizations thoroughly experienced in this field. I know of no official organizations of surveyors.

2. Q. Explain "unbleached" and "untreated" tallow; "undenatured" tallow.

A. "Unbleached and Untreated" tallow means that the material has not been treated with chemicals or decolorizing earth to improve the color or quality, especially color. Since it is almost impossible for the chemist to determine whether or not a tallow has been treated or bleached, we suggest that this term be dropped from contracts and letters of credit. We consider a tallow bleached or treated if we cannot further appreciably bleach it. However, it is possible, through poor processing, for a tallow to be so damaged that it cannot be appreciably bleached in the laboratory, when it is in fact an "unbleached and untreated" tallow. Therefore, we recommend that purchasers relay upon the determination of the "Refine and Bleach Color" test which is definite as to quality of the color when the R & B specifications are stated in the documents.

"Undenatured" tallow is one that has not had the character of the tallow altered by the addition of materials which change either the appearance, odor or taste of the product. Inedible tallow is only denatured if contract or government regulations specifically request or require this treatment. Edible tallow may be treated similarly, if requested, and in addition is often treated with a bitter principal such as brucine alkaloid in order to make it inedible.

3. Q. What is the relation of heat to Acid Value?

A. Excessive heat can abuse a tallow and cause an increase in Free Fatty Acids content. This increase is usually much greater in low grade tallows.

4. Q. What is the relation of Titer to Iodine Value?

A. It is my opinion that there would be little variance in the relation of Titer to Iodine Value in high grade tallows. While this question is seldom asked and I have no experimental data on the subject, I believe that the relation may vary according to the products used to produce the tallow and that the feed of the animal may have a bearing. This problem can be solved by a statement of the maximum Iodine Value desired in the contract documents.

5. Q. When and where is sampling done in domestic and foreign trade?

A. In most cases, the sampling is done at a place where there can be no substitution in the shipment. This is done either in railway cars or trucks or on the dock. In other words, the material is out of the hands of the Seller. In bulk shipments, the tallow is put under the seal of the sampling organization and this seal is broken by the consignee.

6. Q. Generally discuss Activated Earth employed in bleaching tests.

A. The activated earth employed in bleaching tests is controlled and supplied by the American Oil Chemists' Society. A new supply must be obtained August 1, of each year.

7. Q. How should tallow stored, especially in storage tanks in the factory, be heated?

A. We suggest that heat, not to exceed 25 pounds steam pressure, be applied several days before pumping. This application of steam should be such that the exhaust entrainment is hot water rather than live steam.

8. Q. In Japan, tallow means beef tallow but what other fats are mixed into the American tallow?

A. In America, also, as a rule, tallow is mostly produced from beef fat. However, it can contain some sheep fat.

In some plants, lower grades possibly contain skimmings which may be made up of other animal fats.

9. Q. How can one detect and analyze stabilized tallow?

A. This determination is rarely asked for ~~an~~ inedible fats in the

United States. There is a method but I do not have it with me.

10. Q. Are A.O.C.S. sampling methods as correct as their analytical methods?

A. I would say that the analytical methods are not more correct but more precise than the sampling methods. This is due to the varying conditions under which it is sometimes necessary to procure samples.

11. Q. To what temperature should bulk tallow be heated prior to unloading?

A. It is a consensus of opinion that tallow should not be heated to more than 130 degrees F. with a maximum of 135 degrees F.

We believe that our discussion of these problems gave satisfaction to those interested and that a great deal was accomplished in promoting friendly relations and better trade practices. Undoubtedly, further exchange visits between men of our Tallow Industry and men of the Japanese Tallow Industry would be of great benefit to both countries.

To: The United States Department of Agriculture, Foreign Agricultural Service, Livestock and Meat Products Division,
The Administrator and
The National Renderers Association, The Cooperator

From: Richard B. Mortimer, President of the National Renderers Assn.

Subject: Report on Market Development Project for Inedible Animal Fat
in Korea - July 25, 1956 to August 2, 1956

Richard B. Mortimer, President of the National Renderers Association, and William F. Beedle, President of the Geo. W. Gooch Laboratories, Ltd., of Los Angeles, both as representatives of the Cooperator (National Renderers Association) herewith report specifically to both the Department (the Administrator) and the National Renderers Association on the inedible animal fats situation as found to exist in Korea.

Due to unfortunate weather conditions, the mission was delayed in arriving in Korea until July 25. Even after this date it was impossible for the mission to travel over the roads of Korea due to very heavy rains. In excess of five inches fell in one twenty-four hour period. Consequently, it was necessary to confine activities to visiting with government and industry officials. These visits were productive of much information and were found to be well worthwhile.

Before going further we wish to gratefully acknowledge the splendid cooperation and assistance afforded us by Dr. Henry L. Buckardt, Agricultural Attache in Seoul, Korea, and his entire staff. Through his kindness we were able to visit the following listed officials and because of his excellent relations with them we obtained much important information: Mr. Kee-Dong Nam, Chief, Chemical Section, Ministry of Commerce and Industry; Dr. Lee Nam Shin, Chief, Bureau of Livestock, Ministry of Agriculture and Forestry; Mr. Yuong Soo Park, Chief, Livestock Section, Ministry of Agriculture and Forestry; Mr. S. W. Cho, Managing Director of Korean Soap Industrial Association; Mr. Chai Mong In, President, Tairyung Trading Company, Ltd., and of the Aekung Fats and Oils Processing Company, Ltd.

Through additional efforts of Dr. Buckardt and his staff, a schedule of visitations and travel was arranged which, weather considered, permitted us to see as much as physically possible. Unfortunately, the weather eliminated the possibility of traveling to Pusan and the southern tip to the peninsula. We were, however, able to visit Inchon and that trip will be described in future paragraphs.

The livestock population of South Korea is a matter of some conjecture. As of December 31, 1955, it consisted of approximately 1,261,000 hogs, 867,000 cattle, 30,000 goats, 17,000 horses, and 774 sheep. The livestock and meat production of South Korea reached a post-Korean conflict high during 1955. Even so, livestock and meat production is far from being a major industry in the Republic of South Korea. Cattle are raised primarily as work animals. There are no large slaughter houses or meat packing plants with cold storage facilities. Therefore, meat is generally slaughtered on the farm or in towns and villages and consumed soon thereafter. The per capita annual consumption of meat in Korea is phenomenally low. The total is 9 pounds per person per year and is broken down as follows: 5.7 pounds of pork, 1.8 pounds of beef, and 1.5 pounds of chicken. Grains, vegetable farming and fishing occupy the major roles in South Korea. With the above background it can readily be seen that no

livestock or meat products are exported and that actually much must be imported from the United States under government aid programs in order for these people to eat. While the outlook data for 1956 is not available at this time, the first two months show little change in either production, price trends or meat consumption. It is most unlikely that sufficient production will result in enough for export.

From the above data it is very easy to see that Korea is in no position to produce sufficient tallow for its own consumption. Consequently, it must rely entirely on imports from the United States. Due to the complete lack of storage facilities, either at the harbor or at the soap plants themselves, it is necessary that all shipments arrive in drums. In the past the shipments have been entirely too large to be handled by the respective plants and the storage problem has been quite difficult. Government and industry people were unanimous in their wish that the ROK Government would permit tallow to be imported on a schedule which would permit its use as received. We were informed that the quality and quantity of tallow received in the drums have been relatively satisfactory, particularly in the past two years. This situation did not exist, however, in 1952, 1953, and even in the early part of 1954. During that period many of the drums contained foreign matter and the tallow failed to meet contract specifications. In some cases even the weights were short. All, however, were encouraged with recent shipments and felt that considerably more care was being given to their orders by exporters in the United States.

One of our most interesting visits was to the Aekyung Fats and Oils Processing Company, Ltd. plant at Yongdongpo. Mr. Chai Mong In, President, was most gracious and took us on a complete tour of his plant. This is not essentially a soap making plant although they do produce soap for the local Seoul area. Their primary business is in the splitting of tallow, the production of glycerine, stearic acid and oleic acid. The equipment is of excellent quality, new, and the glycerine produced approximately 99% pure. They handle not only the tallow for their own plant in Inchon, but also for other soap plants within the local area. On a later trip to Inchon we were able to visit the soap plants of this same company and were much interested by the antique machinery which they use to produce their soap. The building had been damaged by war but had been rebuilt as best they could. The Inchon plant machinery was in operating condition and in reasonably good repair. We were amazed to see that the soap was of good quality, that it lathered well, looked very good and had a nice perfume. Another interesting point was the packaging line which consisted entirely of about twenty-five or thirty young girls along both sides of a long table. The new soap was placed at one end and the girls handled it by means of a small simple canvas belt conveyor. Their dexterity was simply amazing.

Another of our interesting trips was conducted by Mr. Kee-Dong Nam, Chief of the Chemical Section of the Ministry of Commerce and Industry. We were shown through the government laboratories which, although they had been damaged during the war, were in the process of being rehabilitated. Their equipment was most limited but new units were being installed as rapidly as possible. They now have two small sections in complete operation and their fat and oil section is in the process of reconstruction. When it is realized that the city of Seoul changed hands several times during the last conflict, the progress made by these people since the cessation of hostilities is nothing short of a miracle. They are intensely interested in the work being done in the United States and desire all the

information and help which we can possibly give to them. Because of lack of facilities, sampling and analytical work in the Republic of South Korea are almost non-existent. The government laboratory, which we visited, could eventually be used for the purpose of testing tallow but at the present time they are not ready for this work.

Another interesting trip was to the government experimental agricultural station which is a few miles out of Seoul. This plant is comparable to Beltsville on a very small scale. Their laboratory, which was stripped of instruments during the war, is being rehabilitated as fast as they can afford to do so. When everything is considered, we were surprised at the progress they have made. At the present time they are producing some 8,000 CC's of hog cholera serum per year, which is only adequate for about half their needs. Korea, and in this particular case, the old adage that necessity is the mother of invention is certainly true. These people have little. They need much, and for the most part are doing everything they can to improve their own status.

So far as the market development project in Korea is concerned, it is my intention to be extremely frank. The level of income for these people is so low that food alone comes first. Even though this is the year 1956 we saw women washing clothing in all kinds of weather, in all kinds of streams, and in all kinds of containers. Generally, it appeared that soap was not being used. The clothes were soaked and then beaten with a stick in the old Oriental way. If soap was available, it was usually used for washing the children. It is estimated that the annual income of these people is probably the lowest of any country with whom we have projects. It was our feeling that our problem was to maintain the quantity of tallow going into South Korea and not to endeavor to increase it until they are financially able to consume the end products. We were most encouraged to find that all of the plants have sufficient capacity to use at least twice as much tallow as is now being received. This tallow, however, would have to be properly divided in shipments and not arrive in one or two large quantities as is at present the custom. Further, money or some other program would have to be available to the people so that they could use the soap manufactured by their own companies.

While in Dr. Buckardt's office there was some discussion regarding the school lunch program by the P.T.A. and the Government. The thought occurred to me that it might be possible to give these school children a small bar of soap approximately once per week. This soap could be used to educate them in the subject of personal cleanliness and if there was a small bit left at the end of the week they could take it home to their family. The subject was discussed with Dr. Buckardt and he seemed interested in it. It is our opinion that the U.S. Department of Agriculture should give this matter further consideration.

In addition to government and production people, we had the pleasure of contacting many of the trading companies whose offices were located in Seoul. These people were very frank in discussing business conditions in Seoul with us. They were much interested in the tallow Trading Rules prepared by the Pacific Coast Renderers Association. These traders, together with the government officials and industry people, all expressed a desire to receive a copy of the rules. The matter was discussed with Dr. Buckardt at great length and it was agreed that this would be a most important phase of our visit to Korea. Consequently, copies of the rules have been obtained and forwarded directly to Dr. Buckardt for distribution

as he sees fit. Because of their economy, business conditions in Korea are very difficult. All seem to feel that improvement will be made, even though perhaps at a rather slow pace.

In order to make this report complete, a copy of Mr. Beedle's statement is attached hereto.

Our experiences to date have been such that we feel certain matters should be called to the attention of both the Administrator and Cooperator. These are simply enumerated in the following fashion:

First of all, the Agricultural Attache in the country to be visited should be advised sufficiently beforehand so that a schedule can be prepared and little time wasted after the Cooperator's representatives arrive.

Secondly, the financial situation in the country should be understood clearly by all concerned. Difficulties arose in Korea due to the fact that the Bando Hotel, the only hotel available to civilians, refused to accept anything but American dollars in payment for their services. Through the cooperation of Dr. Buckardt we believe this has been solved.

A third important fact is the season of the year at which the visit is to be made. July and August certainly are not the periods to visit Korea. The temperature was extremely high and the humidity almost unbearable. As a matter of fact, two new suits of clothes were completely ruined. The spring or fall would have been delightful, by contrast.

Dr. Buckardt and his entire staff were most generous of their time and efforts to make our stay in Korea productive of good results. We were met at the airport and Dr. Buckardt personally delivered us there on our departure, August 2. All with whom we had contact seemed delighted to have people from our industry visit Korea. We felt that we were not only most welcome, but that through our efforts we were able to accomplish much toward the betterment of relations, present and future, between the renderers and producers of tallow in the United States and the consumers and importers in the Republic of South Korea. In addition to business, Dr. Buckardt was most generous of his time on Sundays, showing us as much of Korea as the weather permitted. We were able to obtain some very interesting pictures and hope to incorporate them as a supplement to our report.

To: The United States Department of Agriculture
Foreign Agricultural Service

From: William F. Beedle, President of Geo. W. Gooch Laboratories, Ltd.

Subject: Report on Korea Tallow Survey Mission

On Thursday, July 26, 1956, Mr. Mortimer and I called at the office of Dr. H. L. Buckardt, attache of the U.S. Department of Agriculture at Seoul, Korea.

There, we met Dr. Buckardt's staff and were advised that a schedule for our visits to plants relative to the Fat and Oil Industry and to their Government Laboratory would be arranged.

On the following day, Dr. Buckardt took us to meet the Minister of Agriculture and Forestry, Dr. Lee Nam Shin, who is the Chief of the Bureau of Livestock. He later showed us their Experimental Agricultural Station and we had the privilege of going through their laboratories which had a well equipped pathological section. We were told that they produce about 8,000 CC of hog cholera serum per year which is adequate for only about half their need.

On Sunday, July 29, Dr. Buckardt kindly took us on a tour of Seoul.

July 30, Monday, we made a trip to Incon and, en route, inspected the plant of Aekung Fats and Oils Processing Company, Ltd. We were conducted through the plant by the President, Mr. Chi, and the Technical Director, Mr. Park Te Jin and their staff. Here tallow is processed to produce stearic and oleic acids, and glycerine and the equipment is modern and well planned.

At Inchon, we visited the Aeking Fats and Oils Processing Company, Ltd. soap factory, where their packing is done mostly by hand labor.

Tuesday, July 31, Mr. Kee Dong Nam, Chief of the Chemical Section of the Ministry of Commerce and Industry, showed us through the Government Laboratories. New equipment is being installed and they are well on their way to complete operation.

Since tallow processors in Korea receive only drum shipments, we distributed among those interested an outline of the drum sampling technique as described by the American Oil Chemists' Society.

We learned of no independent laboratories in South Korea and it appears that the Government Laboratory would be the one to test the quality of any shipments of tallow where an unbiased report is necessary.

Wherever we went, we met with great interest in the American way of handling tallow shipments and in learning our methods of procedure.



